Ornithological surveys in Bamiyan province, Islamic Republic of Afghanistan

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As part of its USAID-funded Afghanistan Biodiversity Conservation Program, the Wildlife Conservation Society commissioned ornithological surveys of two proposed protected areas, at Band-i-Amir and Ajar in Bamiyan province, central Afghanistan, in spring 2008. The objective of the surveys was to provide baseline ornithological data of breeding birds for the Band-i-Amir proposed national park and Ajar proposed wildlife reserve management plans. The authors, with support from many others, carried out the surveys 27 May–11 June 2008. Of 122 species recorded, 96 were recorded at Band-i-Amir, of which 73 were recorded as possibly, probably or confirmed breeding. At Ajar, all 72 species recorded were possibly, probably or confirmed breeding. Key species recorded as breeding at both sites were Himalayan Snowcock *Tetraogallus himalayensis*, Hume's Short-toed Lark *Calandrella acutirostris*, Red-tailed Wheatear *Oenanthe* (*xanthroprymna*) *chrysopygia*, Sulphur-bellied Warbler *Phylloscopus griseolus*, Hume's Whitethroat *Sylvia* (*curruca*) *althaea*, Brown Accentor *Prunella fulvescens*, Grey-necked Bunting *Emberiza buchanani*, White-winged Snowfinch *Montifringilla nivalis*, Sinai Rosefinch *Carpodacus synoicus* and Spotted Great Rosefinch *Carpodacus* (*rubicilla*) *severtzovi*. At Band-i-Amir, Lesser Sand Plover *Charadrius* (*mongolus*) *atrifrons*, Afghan Snowfinch *Pyrgilauda theresae*, Mongolian Finch *Bucanetes mongolicus* and Crimson-winged Finch *Rhodopechys sanguinea* were recorded as breeding, and in Ajar, Plain Leaf Warbler *Phylloscopus neglectus*, White-capped Bunting *Emberiza stewarti* and Blyth's Rosefinch *Carpodacus grandis*.

INTRODUCTION

Bamiyan province is one of 34 provinces in the Islamic Republic of Afghanistan (Figure 1). Lying in the centre of the country, the provincial capital Bamiyan is some 150 kms from Kabul. Its relative accessibility and the attraction to visitors of both the scenic lakes at Band-i-Amir and the giant statues of the Buddhas have meant that it has been a rela-

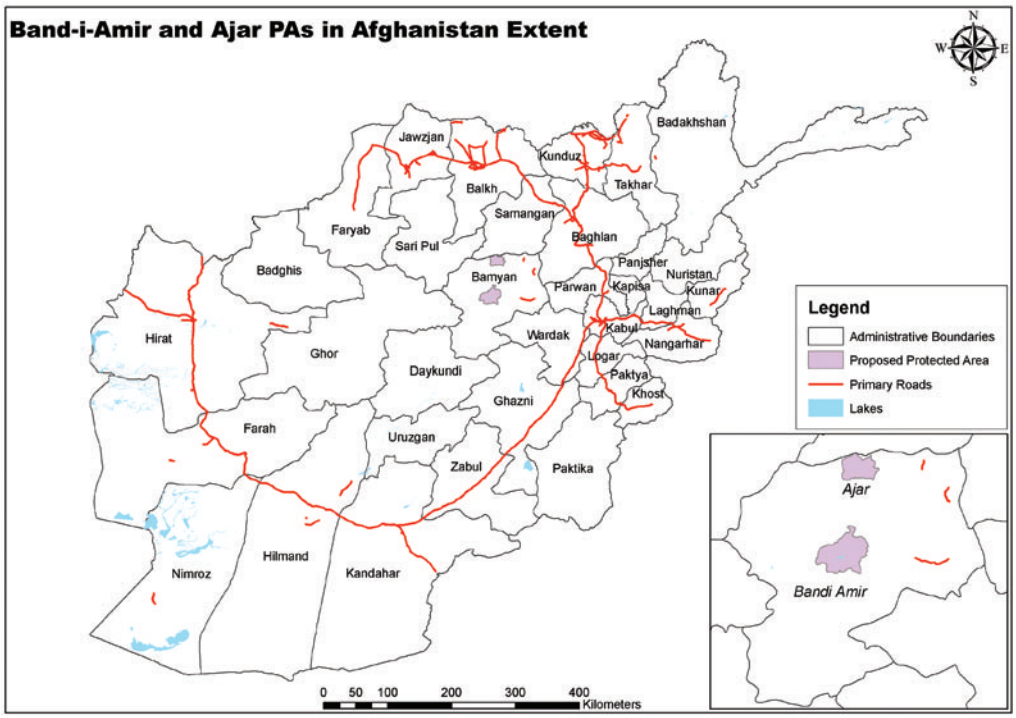

Figure 1. Location of Band-i-Amir and Ajar proposed protected areas in Afghanistan.

tively well visited area within Afghanistan. Meinertzhagen collected specimens of Afghan Snowfinch *Pyrgilauda theresae* in the area in 1937 and it was visited in 1949 by Paludan (1959). It has subsequently been reasonably well documented ornithologically particularly during the 1970's.

As part of its USAID-funded Afghanistan Biodiversity Conservation Program, the Wildlife Conservation Society (WCS) commissioned ornithological surveys of two proposed protected areas, at Band-i-Amir and Ajar in Bamiyan province in spring 2008. The objective of the surveys was to provide baseline ornithological data of breeding birds for the Band-i-Amir proposed national park and Ajar proposed wildlife reserve management plans. The authors, with support from many others, carried out the surveys 27 May–11 June 2008.

Plate 1. Travertine dam and lake, Band-i-Amir. © *Simon Busuttil*

Plate 2. Wetland habitat, Band-i-Amir. © *Simon Busuttil*

BAND-I-AMIR

Band-i-Amir lies in a westward extension of the Hindu Kush mountain range 185 km north-northwest of Kabul and 55 km west of Bamiyan town. The area covered by the survey is based on the watershed for the series of six lakes and associated wetlands covering *c*80 000 ha. The lakes lie at 2900 m asl and are separated by travertine dams (Plate 1), formed when calcite precipitates out from upwelling calcium rich groundwater. The lakes are bounded by limestone cliffs and the surrounding land is mainly a plateau 3200–3400 m asl. In the northern part of the catchment, land rises to 3800 m asl. The lake valley system includes beds of *Phragmites*, *Salix* and wet grassland (Plates 2–4). The catchment forms the headwaters of the Band-i-Amir river which eventually joins the river Balkh which itself disappears into the sand north of Mazar-i-Sharif in northern Afghanistan. The land has been heavily grazed for centuries and is primarily made up of thorn cushion plants, dwarf shrubs and poisonous weeds often dominated by *Artemisia*. It is essentially a degraded cushion shrubland with areas of alpine meadow. Dryland farming ('lalmi') of wheat and barley takes place and the valley is cultivated through irrigation, with planted poplars and willows adding variety. Band-i-Amir is recognized as an Important Bird Area (IBA, Evans 1994). Most of the information on which the IBA status was based was from July–September 1970 when an Oxford University expedition covered the area, focusing mainly on migrant birds (Pimm undated). The IBA falls within the Afghanistan Mountains (secondary area) Endemic Bird Area (Birdlife International 2008).

Plate 3. Wetland habitat, Band-i-Amir. © *Simon Busuttil*

Plate 4. Canyon habitat, Band-i-Amir. © *Simon Busuttil*

There were no documented observations between 1979 and 2002 due to the political and security situation. Some *ad hoc* recording has taken place since then but no systematic survey of breeding species had been carried out. The WCS Management Plan for Band-i-Amir (Band-i-Amir Provisional National Park: A Preliminary Management Plan 2008–2011) lists 84 species as having been recorded for the area, drawn from earlier records (Madge undated, Pimm undated) and from observations made by WCS staff on the ground in the last few years.

AJAR

A former royal hunting preserve, Ajar covers 40 000 to 50 000 ha of the Hindu Kush mountain range in Bamiyan province, some 70 km north of Bamiyan town. The mountainous terrain (Plates 5 & 6) is typical of the Hindu Kush, having a maximum relief of nearly 1800 m (Ajar PWR Valley Provisional Wildlife Reserve: A Preliminary Management Plan, Draft for Consultation January 2008). East–west running ridges with precipitous peaks rise to 3800 m asl and are interspersed with gently rounded and vegetated mountain tops up to 3200 m in elevation. Bisecting the area from east to west is the Jawzari canyon (Dara-i Jawzari) lying at about 2200 m asl with cliffs up to 350 m high. Vegetation is varied and complex with *Stipa*, *Carex*, *Artemisia* and *Amygdalus* communities and limited areas of juniper and willow remaining on remote crags and in wetland areas, respectively. Ajar has no formal recognition as being of importance for birds.

Both sites have a strongly continental climate with low air humidity, high evaporation, wide temperature fluctuations, heavy winter snowfall and virtually no summer precipitation.

METHODOLOGY

Observer field days totalled 25. Fifteen of these were at Band-i-Amir and 10 at Ajar. Two basic methods were used: walked transects and non-transect observations.

In Band-i-Amir, 26 transects were carried out 05.00–13.00 h between 30 May and 1 June and then between 9 and 11 June (total 6 days). In Ajar, 22 transects were carried out 05.25–12.00 h between 4 and 8 June (5 days). Transect time averaged about one hour. Distance covered was more variable due to varying terrain conditions. All transects were made by a single observer (one of the two authors) using Garmin GPS 60 units to plot start and finish points and, in most cases, routes. Routes were not randomly selected but were chosen to try to represent as many habitat types across the two areas as possible within the time constraints and taking into account accessibility and security. All birds seen and heard

Plate 5. Ajar; Red-tailed Wheatear *Oenanthe* (*xanthoprymna*) *chrysopygia* and Grey-necked Bunting *Emberiza buchanani* habitat. © *Simon Busuttil*

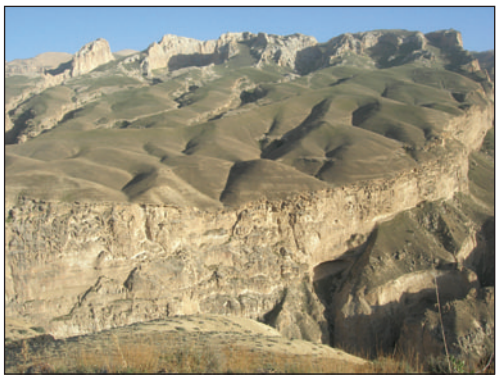

Plate 6. Typical terrain in Ajar proposed protected area. © *Chris Shank*

were counted and no distance restriction was placed on our transect recording.

Non-transect observations were made in Band-i-Amir throughout the period 27 May–1 June and then again 9–11 June and in Ajar 4–8 June (all dates inclusive). Most non-transect observations were made on foot but some were made from vehicles whilst travelling. There is no vehicular access at all within Ajar, whilst there is a network of routes accessible by vehicle through much of Band-i-Amir. We attempted to note all birds, even though for common birds this could not always be achieved. Most observations were made whilst getting to and returning from the transect route and around the two base camps, in Band-i-Amir and Ajar. All species observed were allocated to one of the four breeding status categories defined by the British Trust for Ornithology (www.bto.org.uk, accessed 14 June 2008): Possible, Probable and Confirmed Breeding and Non-Breeding. Evidence for breeding status was collected through both transect and non-transect observations. Certain species received increased levels of observation effort where it was felt that the level of confirmation could be raised.

Raw data was analyzed in Kabul 13–16 June. From our fieldnotes, a figure for the estimated number of individuals observed was calculated. This corresponds to an approximate total number of individuals seen in the area. Wherever an individual was obviously noted twice or more often, it was excluded. For the purposes of our analysis, the taxa *Riparia* (*riparia*) *riparia*, *R.* (*riparia*) *diluta*, *Motacilla* (*citreola*) *citreola*, *M.* (*citreola*) *calcarata*, *M.* (*alba*) *alba* and *M.* (*alba*) *personata* are treated as separate species.

We used the BirdLife International list of biome restricted species (Lachmann *et al* 2006, Mike Evans *in litt* June 2008). Applying these criteria, based on published data, our own experience and conversations with other experts, we made changes to the biome-restricted status of three species for our reporting. Hume's Whitethroat *Sylvia* (*curruca*) *althaea* is not listed as biome-restricted by Lachmann *et al* (2006). However, the species' breeding range is restricted to the Sino-Himalayan Temperate Forests with only very limited extension into the Irano-Turanian Mountains. This fits the criteria for biome-restriction and we have considered it as such here. Sinai Rosefinch *Carpodacus synoicus* is not formally recognised as biome-restricted by Birdlife International. In our view, despite the possibly increasing population in the Middle East (Mike Evans *in litt*), the species is best treated as biome-restricted. If the species is as numerous in the rest of its central Asian range as our fieldwork has shown it to be in central Afghanistan, then it seems likely that over 75% of its world population occurs in the Eurasian High Mountain biome. Though Red-headed Bunting *Emberiza bruniceps* is considered as biome-restricted (Eurasian Desert and Semi-desert) by BirdLife International, it occurs in other biomes (Eurasian High Montane) over

large areas and in high numbers in Tajikistan and Afghanistan (RA pers obs) and is therefore considered non-restricted here.

RESULTS & DISCUSSION

In Band-i-Amir, the 26 transects walked covered 35.1 km (average transect length = 1.35 km) and 1878 individual birds of 63 species were recorded (Table 1), equating to 53 birds/km. The time taken to do these transects was 24 h 42 min (average transect time = 57 min) equating to 76 birds/h. Of the total number of species recorded in Band-i-Amir, 63% were recorded on transects (61 species from a total recorded of 96). If only species considered biome-restricted or categorized as other than of Least Concern (BirdLife International 2008) are taken into account, the observations during transects add up to 521 individuals of 16 species equating to 15.0 birds/km.

At Ajar, the 22 transects covered 28.9 km (average transect length = 1.32 km) and 1333 individual birds of 55 species were recorded (Table 2) equating to 46 birds/km and the time taken to do these transects was 21 h 48 min (average transect time = 59 min) equating to 62 birds/h. Of the total number of species recorded at Ajar, 76% were recorded on transects (55 species from a total recorded of 72) and if only species considered biome-restricted or categorized as other than of Least Concern (BirdLife International 2008) are taken into

Table 1. Bird species recorded in Band-i-Amir, spring 2008. IUCN status: LC = least-concern, NT = near-threatened, EN = endangered, br = biome-restricted, en = endemic. * Fresh flight feather found in suitable habitat.

English Name	Scientific Name	IUCN status	Breeding status in Band-i-Amir	Estimated number of individuals observed
Himalayan Snowcock	*Tetraogallus himalayensis*	LC-br	Probable	10
Chukar Partridge	*Alectoris chukar*	LC	Probable	11
Mallard	*Anas platyrhynchos*	LC	Probable	5
Northern Shoveler	*Anas clypeata*	LC	Non-breeding	1
Little Grebe	*Tachybaptus ruficollis*	LC	Probable	3
Great Crested Grebe	*Podiceps cristatus*	LC	Confirmed	5
Great Egret	*Egretta alba*	LC	Non-breeding	3
Great Cormorant	*Phalacrocorax carbo*	LC	Non-breeding	3
Common Kestrel	*Falco tinnunculus*	LC	Confirmed	35
Eurasian Hobby	*Falco subbuteo*	LC	Possible	1
Saker Falcon	*Falco cherrug*	EN	Possible	1
Lammergeier	*Gypaetus barbatus*	LC	Possible	4
Himalayan Griffon Vulture	*Gyps himalayensis*	LC-br	Non-breeding	1
Cinereous Vulture	*Aegypius monachus*	NT	Non-breeding	2
Western Marsh Harrier	*Circus aeruginosus*	LC	Non-breeding	1
Long-legged Buzzard	*Buteo rufinus*	LC	Possible	15
Golden Eagle	*Aquila chrysaetos*	LC	Probable	2
Common Moorhen	*Gallinula chloropus*	LC	Probable	2
Eurasian Coot	*Fulica atra*	LC	Probable	166
Black-winged Stilt	*H. himantopus*	LC	Non-breeding	1

English Name	Scientific Name	IUCN status	Breeding status in Band-i-Amir	Estimated number of individuals observed
Little Ringed Plover	*Charadrius dubius*	LC	Probable	3
Lesser Sand Plover	*Charadrius (mongolus) atrifrons*	LC-br	Confirmed	4
Common Redshank	*Tringa totanus*	LC	Probable	21
Common Greenshank	*Tringa nebularia*	LC	Non-breeding	3
Common Sandpiper	*Actitis hypoleucos*	LC	Possible	1
Common Black-headed Gull	*Larus ridibundus*	LC	Non-breeding	2
Common Tern	*Sterna hirundo*	LC	Possible	2
Whiskered Tern	*Chlidonias hybridus*	LC	Non-breeding	1
Black-bellied Sandgrouse	*Pterocles orientalis*	LC	Probable	67
Rock Dove	*Columba livia*	LC	Confirmed	67
Laughing Dove	*Streptopelia senegalensis*	LC	Probable	2
Common Cuckoo	*Cuculus canorus*	LC	Probable	14
Eurasian Eagle Owl	*Bubo (bubo) bubo*	LC	Non-breeding	1*
Alpine Swift	*Apus melba*	LC	Non-breeding	2
Common Swift	*Apus apus*	LC	Probable	112
Common Kingfisher	*Alcedo atthis*	LC	Possible	3
Eurasian Hoopoe	*Upupa epops*	LC	Confirmed	18
Long-tailed Shrike	*Lanius schach*	LC	Possible	5
Lesser Grey Shrike	*Lanius minor*	LC	Possible	1
Indian Golden Oriole	*Oriolus (oriolus) kundoo*	LC	Possible	1
Asian Paradise-Flycatcher	*Terpsiphone paradisi*	LC	Possible	2
Eurasian Magpie	*Pica pica*	LC	Confirmed	32
Red-billed Chough	*P. pyrrhocorax*	LC	Confirmed	237
Yellow-billed Chough	*Pyrrhocorax graculus*	LC	Probable	45
Oriental Crow	*Corvus (corone) orientalis*	LC	Possible	2
Hooded Crow	*Corvus cornix*	LC	Possible	3
Northern Raven	*Corvus (corax) corax*	LC	Confirmed	16
Sand Martin	*Riparia (riparia) riparia*	LC	Non-breeding	10
Pale Martin	*Riparia (riparia) diluta*	LC-br	Non-breeding	1
Barn Swallow	*Hirundo rustica*	LC	Non-breeding	20
Eurasian Crag Martin	*Ptyonoprogne rupestris*	LC	Confirmed	162
Common House Martin	*Delichon urbicum*	LC	Confirmed	98
Hume's Short-toed Lark	*Calandrella acutirostris*	LC-br	Confirmed	197
Eurasian Skylark	*Alauda arvensis*	LC	Non-breeding	4
Horned Lark	*Eremophila alpestris*	LC	Confirmed	299
Clamorous Reed Warbler	*Acrocephalus stentoreus*	LC	Probable	40
Paddyfield Warbler	*Acrocephalus agricola*	LC	Probable	32
Blyth's Reed Warbler	*Acrocephalus dumetorum*	LC	Non-breeding	4
Sykes's Warbler	*Iduna rama*	LC-br	Possible	7

English Name	Scientific Name	IUCN status	Breeding status in Band-i-Amir	Estimated number of individuals observed
Siberian Chiffchaff	*Phylloscopus (collybita) tristis*	LC	Non-breeding	4
Sulphur-bellied Warbler	*Phylloscopus griseolus*	LC-br	Confirmed	86
Green Warbler	*Phylloscopus trochiloides nitidus*	LC	Non-breeding	2
Hume's Whitethroat	*Sylvia (curruca) althaea*	LC-br	Probable	7
Common Whitethroat	*Sylvia communis*	LC	Non-breeding	6
Eastern Rock Nuthatch	*Sitta tephronota*	LC-br	Confirmed	74
Wallcreeper	*Tichodroma muraria*	LC-br	Confirmed	10
Rose-coloured Starling	*Sturnus roseus*	LC	Possible	4
Eastern Black Redstart	*Phoenicurus (ochruros) phoenicuroides*	LC	Confirmed	226
Siberian Stonechat	*Saxicola (torquatus) maurus*	LC	Probable	6
Isabelline Wheatear	*Oenanthe isabellina*	LC	Possible	2
Northern Wheatear	*Oenanthe oenanthe*	LC	Confirmed	94
Red-tailed Wheatear	*Oenanthe (xanthoprymna) chrysopygia*	LC-br	Probable	10
Desert Wheatear	*Oenanthe deserti*	LC	Probable	80
Rufous-tailed Rock Thrush	*Monticola saxatilis*	LC	Confirmed	21
Indian House Sparrow	*Passer (domesticus) indicus*	LC	Probable	26
Eurasian Tree Sparrow	*Passer montanus*	LC	Confirmed	110
Rock Sparrow	*Petronia petronia*	LC	Confirmed	44
White-winged Snowfinch	*Montifringilla nivalis*	LC-br	Confirmed	385
Afghan Snowfinch	*Pyrgilauda theresae*	LC-en	Confirmed	47
Brown Accentor	*Prunella fulvescens*	LC-br	Probable	10
Citrine Wagtail	*Motacilla (citreola) citreola*	LC	Obs	Few
Black-backed Citrine Wagtail	*Motacilla (citreola) calcarata*	LC	Confirmed	300
White Wagtail	*Motacilla (alba) alba*	LC	Obs	1
Masked Wagtail	*Motacilla (alba) personata*	LC	Confirmed	2
Tawny Pipit	*Anthus campestris*	LC	Possible	2
Common Chaffinch	*Fringilla coelebs*	LC	Non-breeding	1
Red-fronted Serin	*Serinus pusillus*	LC-br	Probable	44
Eastern Goldfinch	*Carduelis (carduelis) paropanisi*	LC	Possible	5
Twite	*Carduelis flavirostris*	LC	Probable	170
Crimson-winged Finch	*Rhodopechys sanguinea*	LC-br	Confirmed	49
Trumpeter Finch	*Bucanetes githagineus*	LC	Probable	13
Mongolian Finch	*Bucanetes mongolicus*	LC	Probable	7
Common Rosefinch	*Carpodacus erythrinus*	LC	Probable	172
Sinai Rosefinch	*Carpodacus synoicus*	LC-br	Confirmed	47
Spotted Great Rosefinch	*Carpodacus (rubicilla) severtzovi*	LC-br	Probable	12
Grey-necked Bunting	*Emberiza buchanani*	LC-br	Probable	25

account, the observations during transects add up to 429 individuals of 17 species, equating to 14.8 birds/km.

The analysis should be looked on with caution for a number of reasons. The objective of the survey was to collect baseline data, especially of breeding species for both Band-i-Amir and Ajar, and not to carry out distance sampling or collect data on habitat, so whilst any analysis may be of interest, few conclusions should be drawn from comparing the two sites. The analysis shows that transect length and time were similar between the two sites. A greater number of species and total individuals were recorded at Band-i-Amir than Ajar and the number per km and per hour was greater. As no attempt was made to choose transects randomly or to standardize them (other than methodologically) between the two sites, this could be an artifact.

The number of species and of individuals recorded on transects, as a percentage of the total number of species and individuals recorded, was higher for Ajar than for Band-i-Amir in both cases. This probably reflects both the greater amount of time spent at Band-i-Amir (50% more), where all birds seen were still counted towards the total, and the ease of transport around that site compared to Ajar. At Ajar, in order to maximize time recording on transects, a higher proportion of the limited field time was spent on transects. With the network of drivable tracks at Band-i-Amir, more time was spent driving between transects and recording birds outside transects (mostly to assess breeding status). At Ajar the difficult conditions (*eg* heat, topography) and limited time forced us to concentrate on transects.

Thirty-four percent of all individuals recorded at Ajar were of biome-restricted species compared to 13% at Band-i-Amir. This probably reflects both the smaller area of anthropogenic habitat (permanent settlement and irrigated agriculture) at Ajar and the greater area of wetland at Band-i-Amir, holding a high number of individuals of non-biome-restricted species.

Band-i-Amir

Ninety-six species were recorded in Band-i-Amir (Table 1), of which 73 were possibly, probably or confirmed breeding. Of these breeding species, Saker Falcon is classified as Globally Threatened (Endangered) by IUCN, 17 are classified as biome-restricted by Birdlife International (Lachmann *et al* 2006) or by us and Afghan Snowfinch *Pyrgilauda theresae* is classified as a breeding endemic. A further two observed species (*ie* not found to be breeding) are of importance, the Globally Near-Threatened Cinereous Vulture *Aegypius monachus* and the biome-restricted Pale Martin *Riparia* (*riparia*) *diluta*. It is certainly possible that Cinereous Vulture breeds within the area.

Of the 10 species cited in the Band-i-Amir IBA citation (Evans 1994), we were able to confirm the presence during the breeding season of Himalayan Snowcock *Tetraogallus himalayensis*, Lammergeier (Bearded Vulture) *Gypaetus barbatus*, Hume's Short-toed Lark *Calandrella acutirostris*, Hume's Whitethroat, Red-tailed Wheatear *Oenanthe chrysopygia*, White-winged Snowfinch *Montifringilla nivalis*, Afghan Snowfinch and Crimson-winged Finch *Rhodopechys sanguinea*. For the purposes of this report, the area surveyed is assumed to cover the same area as the IBA. We were unable to confirm the presence of Variable Wheatear *Oenanthe picata* or Desert (Small) Whitethroat *Sylvia* (*curruca*) *minula*. We are also able to confirm as breeding Black-backed Citrine Wagtail *Motacilla* (*citreola*) *calcarata*, Sinai (Pale) Rosefinch *Carpodacus synoicus*, Mongolian Finch *Rhodopechys mongolica*, Grey-necked Bunting *Emberiza buchanani* and Sulphur-bellied warbler *Phylloscopus griseolus*.

Table 2. List of bird species recorded in Ajar, spring 2008. LC = least-concern, NT = near-threatened, EN = endangered, br = biome-restricted.

English Name	Scientific Name	IUCN status	Breeding status in Ajar	Estimated number of individuals observed
Himalayan Snowcock	*Tetraogallus himalayensis*	LC-br	Probable	3
Chukar Partridge	*Alectoris chukar*	LC	Probable	67
See-see Partridge	*Ammoperdix griseogularis*	LC-br	Possible	4
Common Kestrel	*Falco tinnunculus*	LC	Confirmed	18
Barbary Falcon	*Falco pelegrinoides*	LC	Probable	2
Lammergeier	*Gypaetus barbatus*	LC	Possible	5
Himalayan Griffon Vulture	*Gyps himalayensis*	LC-br	Possible	15
Short-toed Snake Eagle	*Circaetus gallicus*	LC	Possible	1
Golden Eagle	*Aquila chrysaetos*	LC	Probable	6
Common Sandpiper	*Actitis hypoleucos*	LC	Possible	1
Rock Dove	*Columba livia*	LC	Confirmed	18
Common Cuckoo	*Cuculus canorus*	LC	Probable	8
Eurasian Scops Owl	*Otus scops*	LC	Possible	1
Little Owl	*Athene noctua*	LC	Possible	1
European Nightjar	*Caprimulgus europaeus*	LC	Probable	4
Common Swift	*Apus apus*	LC	Confirmed	209
Eurasian Hoopoe	*Upupa epops*	LC	Confirmed	7
Long-tailed Shrike	*Lanius schach*	LC	Possible	5
Eurasian Magpie	*Pica pica*	LC	Confirmed	15
Red-billed Chough	*P. pyrrhocorax*	LC	Confirmed	95
Yellow-billed Chough	*Pyrrhocorax graculus*	LC	Confirmed	86
Hooded Crow	*Corvus cornix*	LC	Possible	1
Northern Raven	*Corvus (corax) corax*	LC	Possible	9
Rufous-naped Tit	*Parus rufonuchalis*	LC-br	Possible	1
Yellow-breasted Tit	*Cyanistes (cyanus) flavipectus*	LC-br	Possible	2
Eurasian Crag Martin	*Ptyonoprogne rupestris*	LC	Confirmed	94
Common House Martin	*Delichon urbicum*	LC	Probable	24
Red-rumped Swallow	*Cecropis daurica*	LC	Probable	9
Hume's Short-toed Lark	*Calandrella acutirostris*	LC-br	Possible	4
Horned Lark	*Eremophila alpestris*	LC	Probable	6
Scrub Warbler	*Scotocerca inquieta*	LC	Probable	9
Cetti's Warbler	*Cettia cetti*	LC	Probable	24
Clamorous Reed Warbler	*Acrocephalus stentoreus*	LC	Probable	11
Blyth's Reed Warbler	*Acrocephalus dumetorum*	LC	Possible	1
Plain Leaf Warbler	*Phylloscopus neglectus*	LC-br	Possible	4
Sulphur-bellied Warbler	*Phylloscopus griseolus*	LC-br	Confirmed	34
Green Warbler	*Phylloscopus trochiloides nitidus*	LC	Possible	1

English Name	Scientific Name	IUCN status	Breeding status in Ajar	Estimated number of individuals observed
Hume's Whitethroat	*Sylvia (curruca) althaea*	LC-br	Confirmed	39
Eastern Orphean Warbler	*Sylvia (hortensis) crassirostris*	LC	Probable	3
Eastern Rock Nuthatch	*Sitta tephronota*	LC-br	Confirmed	77
Wallcreeper	*Tichodroma muraria*	LC-br	Confirmed	4
Common Myna	*Acridotheres tristis*	LC	Possible	4
Blue Whistling Thrush	*Myophonus caeruleus*	LC	Confirmed	7
Eastern Black Redstart	*Phoenicurus (ochruros) phoenicuroides*	LC	Confirmed	242
Siberian Stonechat	*Saxicola (torquatus) maurus*	LC	Confirmed	2
Northern Wheatear	*Oenanthe oenanthe*	LC	Probable	5
Red-tailed Wheatear	*Oenanthe (xanthoprymna) chrysopygia*	LC-br	Confirmed	109
Desert Wheatear	*Oenanthe deserti*	LC	Probable	7
Variable Wheatear	*Oenanthe (picata) picata*	LC-br	Probable	9
Rufous-tailed Rock Thrush	*Monticola saxatilis*	LC	Possible	3
White-throated Dipper	*Cinclus cinclus*	LC	Possible	3
Indian House Sparrow	*Passer (domesticus) indicus*	LC	Confirmed	31
Spanish Sparrow	*Passer hispaniolensis*	LC	Possible	86
Rock Sparrow	*Petronia petronia*	LC	Confirmed	72
White-winged Snowfinch	*Montifringilla nivalis*	LC-br	Confirmed	13
Brown Accentor	*Prunella fulvescens*	LC-br	Confirmed	22
Black-backed Citrine Wagtail	*Motacilla (citreola) calcarata*	LC	Probable	14
Grey Wagtail	*Motacilla cinerea*	LC	Confirmed	20
Masked Wagtail	*Motacilla (alba) personata*	LC	Confirmed	50
Tawny Pipit	*Anthus campestris*	LC	Confirmed	13
Red-fronted Serin	*Serinus pusillus*	LC-br	Probable	147
Eastern Goldfinch	*Carduelis (carduelis) paropanisi*	LC	Confirmed	32
Twite	*Carduelis flavirostris*	LC	Probable	7
Trumpeter Finch	*Bucanetes githagineus*	LC	Possible	2
Common Rosefinch	*Carpodacus erythrinus*	LC	Possible	5
Sinai Rosefinch	*Carpodacus synoicus*	LC-br	Confirmed	82
Blyth's Rosefinch	*Carpodacus grandis*	LC-br	Probable	32
Spotted Great Rosefinch	*Carpodacus (rubicilla) severtzovi*	LC-br	Probable	4
Rock Bunting	*Emberiza cia*	LC	Confirmed	31
White-capped Bunting	*Emberiza stewarti*	LC-br	Probable	7
Grey-necked Bunting	*Emberiza buchanani*	LC-br	Confirmed	102
Red-headed Bunting	*Emberiza bruniceps*	LC	Confirmed	30

Ajar

We found 73 species at Ajar (Table 2), all of which were found to be possibly, probably or confirmed breeding. None are classified as Globally Threatened, but 21 are classified as biome-restricted by Birdlife International (Lachmann *et al* 2006) and by us.

Ajar is clearly of high importance for the conservation of breeding birds. A high number of biome-restricted species were found to be possible, probable or confirmed breeders. Species like See-see Partridge *Ammoperdix griseogularis* and Plain Leaf Warbler *Phylloscopus neglectus* reach the eastern edge of their distribution range here, while Yellow-breasted Tit *Cyanistes* (*cyanus*) *flavipectus*, Rufous-naped Tit *Parus rufonuchalis* and Blyth's Rosefinch *Carpodacus grandis* reach the western edge of their distribution range. However, it is currently not known how Ajar compares with other areas in the Hindu Kush.

Notes on important species:

Saker Falcon *Falco cherrug*. One bird was seen in suitable breeding habitat at Band-i-Amir and as the species is relatively faithful to its breeding sites, it was categorised as a possible breeder. More observations are needed to confirm its status.

Cinereous Vulture *Aegypius monachus*. Observed in Band-i-Amir only, where two birds were seen crossing the area at high altitude. The species is classified as a non-breeding visitor, but future research could prove it to breed.

Himalayan Griffon Vulture *Gyps himalayensis*. More numerous in Ajar than at Band-i-Amir. It was mainly observed at higher altitudes and was classified as a possible breeding species in both areas. Future research may identify breeding cliffs, which would be the most essential areas to protect for this mobile species.

Himalayan Snowcock *Tetraogallus himalayensis*. A probable breeder, found on top of high cliffs and steep areas with many crags (Plate 7), always above 3100 m. The species is restricted to the Eurasian High Montane biome and reaches the western limit of its global distribution in the mountains of northern Afghanistan.

See-see Partridge *Ammoperdix griseogularis*. This biome-restricted species (Irano-Turanian Mountains) was found in Ajar only in small numbers on steep rocky slopes.

Lesser Sand Plover *Charadrius* (*mongolus*) *atrifrons*. Observed in Band-i-Amir where it was found breeding. Two pairs of adults with mobile young were seen in a karst area on a flat mountain top on the eastern edge of the area. This observation constitutes a significant range extension, the closest known breeding areas are in the Pamir mountains (Rasmussen & Anderton 2005).

Hume's Short-toed Lark *Calandrella acutirostris*. Strikingly numerous in open and undulating country in Band-i-Amir but only in small numbers in Ajar. It was mainly found in the low to mid-level areas of Band-i-Amir and less numerous on the highest plateaus. This coincides with the areas that are used for agriculture though it may not be agriculture dependent (in the Wakhan, Pamir and Darvoz mountains of Tajikistan, the species breeds far away from agricultural lands, RA pers obs). Moreover, the survey covered only a very short period of the year during the breeding season. The species is restricted to the Eurasian High Montane biome and is close to the southwestern edge of its distribution range in Band-i-Amir.

Brown Accentor *Prunella fulvescens*. Found in canyons and along crags in higher altitudes of both Ajar and Band-i-Amir. The species is restricted to the Eurasian High Montane biome and is close to the southwestern edge of its distribution range in Band-i-Amir.

Plate 7. Habitat of Himalayan Snowcock *Tetraogallus himalayensis* and Spotted Great Rosefinch *Carpodacus* (*rubicilla*) *severtzovi* at Band-i-Amir. © *Simon Busuttil*

Plate 8. Remnant juniper woodland, Ajar. Habitat for Plain Leaf Warbler *Phylloscopus neglectus* and Grey-necked Bunting *Emberiza buchanani*. © *Simon Busuttil*

Red-tailed Wheatear *Oenanthe* (*xanthoprymna*) *chrysopygia.* Listed as *Oenanthe xanthopryma* in the IBA description (Evans 1994). This biome-restricted (Irano-Turanian Mountains) species was more common in Ajar than in Band-i-Amir. It was found on boulder slopes (Plate 5), in dry rocky parts of the bottom of canyons and around crags with juniper.

Variable Wheatear *Oenanthe* (*picata*) *picata.* Found in Ajar only and mainly on the arid slopes adjacent to agricultural land. All birds observed within the proposed protected area belonged to the *capistrata* morph. Both the *picata* morph and 'Black-bellied Wheatear' *Oenanthe* (*picata*) *opistholeuca* were observed within 50 km of the survey area at the village of Ruy-i-Sang. Variable Wheatear is restricted to the Irano-Turanian Mountains biome.

Sykes's Warbler *Iduna rama.* Observed in areas of shrub in steep valleys and along streams in Band-i-Amir. The species may breed in such habitats and was therefore classified as a possible breeder. Future surveys will have to determine whether it really breeds. It is biome-restricted (Eurasian Desert and Semi-desert).

Hume's Whitethroat *Sylvia* (*curruca*) *althaea.* This warbler was recorded in well-vegetated areas of both Ajar and Band-i-Amir. In Ajar it was found mostly in juniper vegetation, in Band-i-Amir mostly in willows and bushes of the Rosaceae family in canyons and along small streams. Hume's Whitethroat is considered biome-restricted for the purposes of this study.

Plain Leaf Warbler *Phylloscopus neglectus.* Observed in Ajar on several occasions. All observations took place in the vicinity of juniper stands (Plate 8), including the densest remaining juniper stands in the main canyon. The species is restricted to the Irano-Turanian Mountains biome and reaches the eastern (possibly north-eastern) limit of its distribution range in the wider surroundings of the surveyed areas. Paludan (1959) found only six individuals at three locations during his extensive expedition to Afghanistan. The closest of these locations is located more than 300 km to the west of the surveyed areas described here.

Plate 9. Entrance to Jawzari canyon, Ajar. Habitat of White-capped Bunting *Emberiza stewarti* and Blyth's Rosefinch *Carpodacus grandis*. © *Simon Busuttil*

Plate 10. Band-i-Amir lake. Habitat of Sinai (Pale) Rosefinch *Carpodacus synoicus*. © *Simon Busuttil*

Sulphur-bellied Warbler *Phylloscopus griseolus.* This warbler was encountered quite commonly where there was some scrub on steep rocky slopes and on the edge of scree. It was also found on cliffs (including canyons) with shrubby vegetation. Sulphur-bellied Warbler is restricted to the Eurasian High Montane biome.

Afghan Snowfinch *Pyrgilauda theresae.* Observed in Band-i-Amir only, where it is a relatively common breeder in open habitats (*Artemisia* steppes, lalmi). It was missing in the canyons, screes and other habitats with very limited vegetation. Earlier ornithological work suggested that the species leaves the area in winter (RA pers obs 2006). The observations made during this survey appear to be the first made of this species in this area during the breeding season since Paludan in 1948 (Paludan 1959).

Afghan Snowfinch is an endemic species to Afghanistan though with specimens collected in winter in Turkmenistan and unsubstantiated records from Tajikistan (Tolstoy & Geipel 1990), and was the reason for Birdlife International to designate central Afghanistan a secondary Endemic Bird Area (BirdLife International 2008).

Red-fronted Serin *Serinus pusillus.* Very numerous along crags, cliffs, canyons and in rocky valleys of both surveyed areas.

Crimson-winged Finch *Rhodopechys sanguinea.* Quite common at Band-i-Amir. It was usually most commonly found in canyons, but also in relatively open undulating country including *Artemisia* steppe and fallow fields (lalmi or irrigated). Nearby crags and cliffs presumably are necessary for the occurrence of the species in open country. It is biome restricted (Eurasian High Montane).

Blyth's Rosefinch *Carpodacus grandis.* Found in Ajar only, especially along the larger canyons and in places where there are junipers (Plate 9). The surveyed area constitutes probably the westernmost limit of the distribution of this overall rather scarce species. Paludan (1959) had found it exclusively in Nuristan, eastern Afghanistan.

Spotted Great Rosefinch *Carpodacus* (*rubicilla*) *severtzovi.* It inhabits high cliffs and canyons in both areas, being more numerous in Band-i-Amir. This seems to be a new finding, as the previously known range did not reach as far west. Paludan (1959) did not find the species on his expedition, but did list it in his preliminary checklist of birds of Afghanistan. It is unclear whether, except for the type specimens of *diabolica* (see below), any museum

specimens of this taxon exist from Afghanistan. The limited evidence therefore suggests that this is an isolated population.

The areas where the birds spend most of their time are completely inaccessible (Plate 7) and knowledge of the voice of this species is therefore critical to find it. Several tentative identifications of this species were made in Band-i-Amir before it could be positively identified and recorded. It seems to be somewhat more numerous and widespread in Band-i-Amir than in Ajar.

The populations of Great Rosefinch occurring from the Himalayas through the Hindu Kush to the Altai mountains further north have been split from the Caucasian populations as Spotted Great Rosefinch *Carpodacus severtzovi* (Rasmussen & Anderton 2005). A further taxon, *diabolica*, was described from Sanglech, Afghanistan (Vaurie 1949) though it is unclear whether it is valid.

Sinai (Pale) Rosefinch *Carpodacus synoicus.* Quite common in both areas and was found mainly in rocky areas, including canyons (Plate 10), screes, cliffs and arid slopes with boulders. Sinai Rosefinch occurs in Afghanistan as an endemic subspecies, *salimalii*. The species itself is considered biome-restricted for the purpose of this report.

White-capped Bunting *Emberiza stewarti.* Observed at Ajar only and found in the main canyon (Plate 9) around the area where juniper grows most densely. The species is biome-restricted. Ajar is close to the western edge of its distribution range.

Grey-necked Bunting *Emberiza buchanani.* This bunting, which is restricted to the Irano-Turanian Mountains biome, was found in both areas but was particularly numerous in Ajar. It was most commonly found on slopes with some scrubs or bushes, from screes with single bushes to *Artemisia* steppes that cover a majority of the areas (Plates 5 & 8).

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